Physiology

ANDRIANOVA, L. A.

SD. JPRS 54768
22 DEC 71

UDC 612.822.2-06:612.766.2

EFFECT OF HYPOKINESIA ON THE HYPOTHALAMIC-HYPOPHYSEAL NEUROSECRETORY SYSTEM IN RATS

[Article by L. A. Andrianova; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 5, No 5, 1971, submitted for publication 23 January 1971, pp 26-29]

Abstract: Animals exposed to hypokinetic conditions exhibited an activation of the hypothalamic-hypophyseal neurosecretory system at early stages during exposure. The reaction was characterized by release of the neurosecretory substance from the hypophyseal posterior lobe and an increase in the antidiuretic hormone concentration in the blood.

Prolonged restriction of muscular activity in the body results in functional changes in most of its systems (V. V. Parin, et al.; I. V. Fedorov, et al.; Ye. N. Birykov, et al.), particularly in the hypothalamic-hypophyseal system (V. V. Portugalov, et al.; T. V. Artyukhina; T. A. Kareva; V. B. Pishchik).

The objective of our study was an investigation of the state of nuclei in the frontal hypothalamus and posterior lobe of the hypophysis during hypokinesia by a comparison of data from a morphological investigation and the results of determination of biological activity of extracts of the hypothalamus and blood plasma.

Method

The work was done on 70 rats, of which 42 were in a state of restricted muscular activity, whereas 28 served as the control. The experimental rats were kept in special restrictive cages. All the animals received an unlimited amount of water and dry briquetted fodder with the addition of sunflower oil and fish fat in accordance with the norm. The animals were examined on the 3rd, 15th, 45th and 60th days after exposure to hypokinesia.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R002065900001-6

USSR UDC: 621.315.3

VASIL'YEVA, Z. A., ANDRIANOVA, I. V., VLADIMIROV, Ye. A.

"An Effective Method of Removing Enamel Insulatic From Microwires"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1971, vyp. 1, pp 150-152 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5Zh14)

Translation: The proposed method of chemically heat treating enamel insulation guarantees complete removal without mechanical and chemical damage to the microwire filament. The method is distinguished by rapidity of cleaning and by such a clean surface that soldering quality is improved and thermocompression welding can be used instead of soldering. Group cleaning is possible. The cleaning process can be mechanized. Resumé.

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UDC 546.183

USSR

NIFANT'YEV, E. Ye., ANDRIANOVA, L. P., KOSTROMIN, N. P., and CHAN DIN' DAT, Moscow State University imeni M. V. Lomonosov and Moscow Pedagogical Institute imeni V. I. Lenin

"Acid Phosphites of Methylglucoside and 1,2-Cyclohexylideneglucose"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 7, Jul 73, pp 1619-1624

Abstract: Phosphorylation of 1,2-cyclohexylideneglucofuranose and α-methylglucoside by the mono-, dimethyl phosphite and by phosphorous acid occurs principally at the primary alcohol group of the sugar. During the esterification of α-methylglucoside with the phosphonous acid a phosphonite is formed which can be oxidized to the respective phosphonate.

1/1

TECHNICAL TRANSLATION

ENGLISH TITLE: PROBLEMS OF LASER BEAM DATA TRANSMISSION. PROCEEDINGS OF THE FIRST ALL-UNION CONFERENCE, KIEV, SEPTEMBER 1968

FOREIGN TITLE: PROBLEMY PEREDACHI INFORMATSII LAZERNYM IZLUCHENIYEM

AUTHOR: I. A. DERYUGIN, ET AL.

SOURCE: KIEV ORDER OF LENIN STATE UNIVERSITY IMENI T.G. SCHEVCHENKO

Translated for FSTC by ACSI

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ANDRIANOVA, I. I.

2/2 025 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0102792

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FERROUS PREPARATION FERBITOL TO BE INJECTED INTRAMUSCULARLY WAS USED IN A POLYCLINICAL DEPARTMENT OF THE LENINGRAD INSTITUTE OF HEMATOLOGY AND BLOOD TRANSFUSION IN 45 PATIENTS WITH HYPOCHROMIC HYPOFERRIC ANEMIA OF VARIOUS ETIOLOGY. THE DURATION OF THE ILLNESS WAS FROM SEVERAL MONTHS TO 10 YEARS. THE USE OF THE PREPARATION SHOWED ITS HIGH EFFICACY AND ABSENCE OF SIDE EFFECTS. AFTER A COURSE OF TREATMENT (11-13 INJECTIONS IN A DOSE OF 2 ML DEPENDING UPON THE SEVERITY OF ANEMIA) AN INCREASE OF HEMOGLOBIN LEVEL, AS AN AVERAGE BY 1 UNIT, AND OF ERYTHROCYTE COUNT BY 35000 PER ONE INJECTION WAS OBSERVED IN ALL THE PATIENTS. RETICULOCYTIC CRISIS COMES ON THE 6-8TH DAY AND MAKES, AS AN AVERAGE, 65PERCENT SUBO. SIMULTANEOUSLY GENERAL CONDITION OF PATIENTS IMPROVED AND THEIR WORKING CAPACITY REGAINED. THE PREPARATION CAN BE RECOMMENDED FOR THE TREATMENT OF HYPOFERRIC ANEMIA IN POLYCLINICAL CONDITIONS.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--USE OF FERBITOL FOR THE TREATMENT OF PATIENTS WITH HYPOFERRIC ANEMIA IN A POLYCLINIC -U-

AUTHOR-(02)-ABAZID, M.A., ANDRIANOVA, I.G.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 3, PP 106-108

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANEMIA, IRON COMPOUND, HEMOGLOBIN, ERYTHROCYTE, BLOOD COUNT

CONTROL MARKINGS--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1966/0330 STEP NO--UR/0504/70/042/003/0106/0108

CIRC ACCESSION NO--AP0102792

UNCLASSIFIED

Acc. Nr: AP0052528 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR 0459

ANDRIANOVA G.P.

101288s **Theory of necking during polymer elongation.** Andrianova, G. P.; Kargin, V. A. (Inst. Neftekhim. Sin. im. Topchieva, Moscow, USSR) *Vysokomol. Soedin., Ser. A* 1970, 12(1), 3-9 (Russ). A theory of necking was developed in terms of the free vol. theory. The theory was based on 2 assumptions: (1) the glass transition temp. (T_g) had a certain const. value relative to free vol. regardless of whether the resulting free vol. was due to a change in temp. or external stress; (2) the change in sample vol. during deformation below T_{g0} (where T_{g0} is T_g without stress) reflected the total increase in free vol. Increasing the stress lowered T_g, and if the drawing was carried out below T_{g0}, necking occurred when the stress was great enough to lower T_g from T_{g0} to the operating temp. CKJR

REEL/FRAME
19821171

USSR

UDC 627.942

ANDRIANOV, YU. A.

"A Phase Indicator for Pilotage"

Leningrad, Sudostroyeniye, No 11, Nov 70, pp 44-45

Abstract: The article, written by the inventor, deals with a new type of semiautomatic phase indicator of a guide cable for piloting ships. The basic features of the indicator, in which is employed the phase method of indication of the lateral deviation of the ship, consists in the employment of a new circuit of a contactless tracking system for measuring the phase difference between the components of the magnetic field of the cable and contactless signalization system of the central zone, which is made in accordance with a logical circuit. The structure and operation of the instrument are described. 2 figures.

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2/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0127656

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT IS INVESTIGATED OF AN EXTERNAL OSCILLATING MAGNETIC FIELD ON THE DIRECT CURRENT FLOWING IN AN IMPERFECT SUPERCONDUCTOR OF THE SECOND KIND. IT IS FOUND THAT WHEN THE VARIABLE COMPONENT OF THE EXTERNAL FIELD AMPLITUDE EXCEEDS A CERTAIN THRESHOLD VALUE AN EFFECTIVE DIRECT CURRENT RESISTANCE ARISES. THE DEPENDENCE OF THIS QUANTITY ON OSCILLATING FIELD FREQUENCY, AMPLITUDE OF VARIABLE COMPONENT, MAGNITUDE OF CONSTANT COMPONENT AND VALUE OF DIRECT CURRENT FLOWING IN THE SUPERCONDUCTOR IS DETERMINED. THE DEPENDENCE OF THE THRESHOLD AMPLITUDE OF THE EXTERNAL FIELD ON CURRENT AND FIELD STRENGTH IS INVESTIGATED. A THEORY IS PROPOSED WHICH EXPLAINS THE EXPERIMENTAL RESULTS. FACILITY: INSTITUT VYSOKIKH TEMPERATUR, AKADEMII NAUK SSSR.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EFFECTIVE RESISTANCE OF AN IMPERFECT SUPERCONDUCTOR OF THE SECOND KIND IN AN OSCILLATING MAGNETIC FIELD -U-

AUTHOR-(05)-ANDRIANOV, V.V., ZENKEVICH, V.B., SURGUZOV, V.V., SYCHEV, V.V., TERNOVSKIY, F.F.

COUNTRY OF INFO--USSR

A

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 5, PP 1523-1531

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SUPERCONDUCTOR, OSCILLATION, MAGNETIC FIELD EFFECT, DEPTH CURRENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0006 STEP NO--UR/0056/70/058/005/1523/1531

CIRC ACCESSION NO--AP0127656

UNCLASSIFIED

ANDRIANOV, V. V.

CAROL

JPRS 60590

20 November 1973

(S)

UDC 533.98+537.312.62

DISCHARGE OF A SUPERCONDUCTING STORAGE DEVICE THROUGH AN INVERTER

[Article by V. V. Andrianov, V. B. Zenkevich, O. V. Popkov, B. N. Sergeyenkov, A. G. Sukhorukov, V. V. Sychev, V. A. Zoyma, and V. S. Sheynkman; reported by academician V. A. Kirillin on 16 June 1970; Moscow, Doklady Akademii Nauk SSSR, Russian, Vol 196, No 2, 1971, submitted 9 June 1970, pp 320-323]

Superconductive inductive power storage devices are promising for use in a number of scientific and engineering fields as emergency sources of electric power, power sources for covering peak loads in power systems, and as high power electric pulse sources.

The amount of energy stored in this type of a device can be quite large. In particular, a storage device for covering peak loads of 10^{13} joules is discussed [1]. As compared to other possible methods, superconducting storage devices have a number of technical and economic advantages for storing relatively high energies. Frequently, a necessary condition for the efficient utilization of the storing device is the use of an inverter for transferring the energy stored in the magnetic field to the AC network. There is no information at present on any attempts for the practical realization of a process for transferring the energy from a superconducting storage device to an electric power system.

The inversion of energy stored in a superconducting solenoid can be accomplished at a constant average value of the inverted energy as well as at a constant average value of the voltage applied to the solenoid terminals equal to the average value of the counter electromotive force of the inverter.

In the latter case, the velocity of energy transfer is maximal for a given limiting value of the voltage. It should be noted in this connection that it is possible to use the inverter as an external load when transferring the energy from large superconducting magnetic systems for various purposes (power hydromagnetic generators, electric motors, bubble chambers, etc.) in emergency situations (for example, when the normal phase appears in the winding). As compared to load resistances usually used in such cases, semiconductor inverters are incomparably more compact, do not require high power cooling systems, etc.

[I - USSR - F]

USSR UDC: 621.372.061

ANDRIANOV, V. P.

"Singularities of Envelope Detection in the Case of Nonideal Characteristics of a Communications Channel"

Tr. VNII Zh.-d. transp. (Works of the All-Union Scientific Research Institute of Railway Transportation), 1970, vyp. 412, pp 19-27 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A127)

Translation: The author considers a discrete data transmission channel designed on the basis of a band-pass telephone channel. Its nonlinearity is studied as well as the effect which deviation from ideality in the phase and frequency responses of the channel, and also attenuation characteristics have on data transmission. It is shown that the nonlinearity of the data transmission channel may reach ~100%, nonuniformity of attenuation characteristics having less effect on this nonlinearity than does the imperfect nature of the phase reponse of the telephone channel. The results of computations are presented and used as a basis for making some recommendations. Four illustrations, one table, bibliography of three titles. N. S.

1/1

ANDRIANOV, V.A.

UDC [illegible]29.7.[illegible].54.[illegible]

"Effect of a priori Information on the Location of an Object on the Quality of Radar Detection," [illegible] Vovrich, G. A. Volkova, M. V. [illegible], V. A. Andrianov, Teoriya i Tekhnika Radiolokatsii, III, Trudy MAI (Radar Theory and Practice, III, Works of the Moscow Order of Lenin Aviation Institute imeni Sergo Ordzhonikidze), No 207, Mashinostroyeniye Press, 1970, pages 204-211

A study was made of the possibility of using a priori information about the location of objects in the given ranges for calculating the radar energy potential. Relations are presented for the probability of making a correct decision as a function of the magnitude of the probabilities of correct detection and false alarm. The possibility of reduction of the required transmitter power for normal distribution density of the range to the target is demonstrated. There are 8 illustrations and a 3-entry bibliography.

USSR [illegible]

[illegible], V.A. (Institute Of Radio Engineering [illegible])

"Radiation Field Of [illegible] Aperture In [illegible] Large Radius"

Izv.VUZ [illegible]

Abstract: [illegible] radiation field of a [illegible]-directional antenna [illegible] to ultra[illegible] large [illegible] considered [illegible] space in the [illegible] a [illegible] solution [illegible] problem, which [illegible] by a [illegible] parallel [illegible] the effect [illegible] cation [illegible] The authors [illegible] 1971.

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2/2 068 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128658

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AGING OF FLAME RESISTANT PNFA PLASTIC, CONTG. FOSFACRYLAT AS 1 OF THE BINDERS (U.S.S.R. 220,494), IN BOILING WATER, OPEN AIR, OR AT 100DEGREES UNDER ARTIFICIAL IRRADN. WAS APPROX. THE SAME AS THAT OF A PLASTIC (GLASS FIBER POLYESTER LAMINATE) CONTG. THE SAME COMPONENTS EXCEPT FOR FOSFACRYLAT. THE PROPERTIES (BENDING STRENGTH, TENSILE STRENGTH AT BREAK, IMPACT STRENGTH, WATER ABSORPTION, FLAME RESISTANCE) OF PNFA SHOWED CONSIDERABLE SEASONAL VARIATIONS, BUT LITTLE OVERALL CHANGE AFTER 3 YEARS' STORAGE IN THE OPEN.

UNCLASSIFIED

1/2 068 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--AGING OF A FLAME RESISTANT GLASS REINFORCED PLASTIC PNFA -U-

AUTHOR-(03)-VOROBYEV, V.A., ANDRIANOV, R.A., DUMOV, S.N.

COUNTRY OF INFO--USSR

SOURCE--STROIT. MATER. 1970, (3), 35-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--FIRE RESISTANT MATERIAL, GLASS FIBER, POLYESTER RESIN, REINFORCED PLASTIC, SEASONAL VARIATION, WEATHERING, PLASTIC MECHANICAL PROPERTY, TENSILE STRENGTH, POLYMER BINDER, RADIATION EFFECT/(U)PNFA GLASS REINFORCED PLASTIC, (U)FOSFACRYLAT POLYMER BINDER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1242 STEP NO--UR/0228/70/000/003/0035/0036

CIRC ACCESSION NO--AP0128658

UNCLASSIFIED

USSR UDC 614.37:691.175(049.3)

VOROB'YEV, V. A., Honored Scientist and Technician, RSFSR, Doctor of Technical Sciences and ANDRIANOV, R. A., Candidate of Technical Sciences (Reviewers)

Gigyena i stroitel'nyye plastmassy (Hygiene and Building Plastics), by K. I. Stankevich, Kiev, Izd-vo "Budivel'nik" 1968

Moscow, Gigyena i Sanitariya, No 1, 1970, pp 117-119

Abstract: More than three-fourths of the monograph is devoted to a description of polymers, stabilizers, plasticizers, and polymer building materials. The hygienic characteristics of the raw material used in the production of polymers are presented in considerable detail, but very little information is given on the hygienic evaluation of polymer building materials. The errors, contradictions, and generally muddled organizations of the material make the book useless.

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2/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0125109

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS PAPER PRESENTS THE RESULTS OF MEASUREMENTS, MADE AT THE KAZAN RADIO ASTRONOMY OBSERVATORY (USSR), OF THE ORBITS OF METEORS AND THE INCIDENT FLUX OF METEOROIDS. TWO NEW RADIO METHODS HAVE BEEN USED WHICH REMOVE THE SENSITIVITY LIMITATIONS OF A BACK SCATTER RADAR FOR FAINT AND FAST METEORS. THIS IMPROVES THE STATISTICAL RELIABILITY OF THE FLUX MEASUREMENTS. THE ELIMINATION OF VELOCITY SELECTION HAS NOT RESULTED IN CONSIDERABLE CHANGES IN THE DISTRIBUTIONS OF ORBIT PARAMETERS. OBSERVATIONS FOR MANY YEARS HAVE SHOWN THAT SEASONAL PECULIARITIES IN THE DISTRIBUTIONS OF SPORADIC METEOR RADIANTS OVER THE CELESTIAL SPHERE AND THE AVERAGE INCIDENT METEOR PARTICLE FLUX VALUE REAMIN UNCHANGED FROM YEAR TO YEAR.

FACILITY: KAZANSKII GOSUDARSTVENNYI UNIVERSITET, KAZAN, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THE DISTRIBUTION OF ORBIT PARAMETERS AND THE CHANGES IN INCIDENT METEOR PARTICLE FLUX DENSITY -U-

AUTHOR-(03)-ANDRIANOV, N.S., PUPYSEV, U.A., SIDOROV, V.V.

COUNTRY OF INFO--USSR

SOURCE--ROYAL ASTRONOMICAL SOCIETY, MONTHLY NOTICES, VOL. 148, NO. 2, 1970, P. 227-237

DATE PUBLISHED-------70

SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS

TOPIC TAGS--ORBIT PARAMETER, METEOR, ASTRONOMIC OBSERVATORY, METEOR RADIANT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1481 STEP NO--UR/0000/70/148/002/0227/0237

CIRC ACCESSION NO--AP0125109

UNCLASSIFIED

evaluation of observational selection is more precise. The determined distributions of orbital elements for the most part coincide with the distributions obtained by the radar method. There are differences in details, attributable to different selection conditions and a difference in the sensitivity of the apparatus used. For example, the i and e distributions in these observations are considerably closer to photographic data than to radar data. The percentage of short-period orbits (with a < 1) was even greater than in radar observations.

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Acc. Nr.: AP0042373 ANDRIANOV N.S. Ref. Code: UR 0454

JPRS 50162

Study of Orbits of Small Meteor Bodies by Oblique Scattering Method

(Abstract: "Study of the Orbits of Small Meteor Bodies by the Oblique Scattering Method," by N. S. Andrianov, V. P. Popova and V. V. Sidorov, Kazakh State University; Moscow, Astronomicheskiy Vestnik, Vol IV, No 1, 1970, pp 43-48)

The authors proposed the oblique scattering method for studying the orbits of small meteor bodies at the IAU Symposium No 33 in 1967; this paper now describes practical investigations of the method. Since 1965 the method has been used in measuring 3,200 radiants and the velocities of individual sporadic meteors brighter than approximately $+8^m_r$. The mean square errors for measuring radiant coordinates are 2°.5 and for velocity 1.5 km/sec. These estimates were confirmed on the basis of observations of the Geminids stream. The radio magnitude of a meteor was estimated using the formula $m_r = 40 - 2.5 \log \alpha_m$, where α_m is the electron density at the point of maximum ionization. Using the measured radiants and velocities, an electronic computer was used in calculating the orbits for 1,090 meteors brighter than approximately $+6^m_r$ and for 500 meteors brighter than approximately $+8^m_r$. In contrast to the radar method, the new radio method makes it possible to observe faint meteors having great velocities and

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Reel/Frame 19760326

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ANDRIANOV, A. S.

It is necessary to know the distribution of the geocentric velocities of sporadic meteors over the celestial sphere in order to calculate the meteoric flux of meteors with a mass greater than M_0 or creating an ejection density greater than γ_0 in its trail. It is necessary to know it for calculations of the frequency and especially the coverage coefficient in the design of meteoric radio lines, if the density distribution of radiants over the celestial sphere even exists. Such distributions can only be obtained on the basis of the measurements of the radiants and velocities of meteoroid meteors both by photographic and by radar methods.

*Numbers in the margin indicate pagination in the foreign text.

2/2 023 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134459

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PREPN. OF DIAPOSITIVES DIRECTLY FROM PHOTOGRAPHIC MATERIAL FT 41 A PHENIDONE HYDROQUINONE DEVELOPER (1ST DEVELOPER) AND A DEVELOPER CONTG. T-32 (N,ETHYL,N,(2,HYDROXYETHYL),P,PHENYLENEDIAMINE SULFATE), ALPHA,NAPHTHOL, AND PHENIDONE (2ND DEVELOPER) WERE USED. THE OPTIMAL CONCNS. OF KNCS, HYDROQUINONE, PHENIDONE, AND T-32 WERE DETD. PROCESSING SCHEME: (1) 1ST DEVELOPMENT 5-7 MIN AT 20DEGREES (DEVELOPER COMPN.: PHENIDONE 0.4, HYDROQUINONE 10, ANHYD. NA SUB2 SO SUB3 70, NA SUB2 SO SUB3 60, KBR 7, KNCS 2.5 G, H SUB2 O TO 1000 ML); (2) WASHING 10 MIN AT 14-16DEGREES, (3) BLEACHING 1-2 MIN AT 20DEGREES (K SUB2 CR SUB2 O SUB7 10 G, H SUB2 SO SUB4 10 ML, H SUB2 O TO 1000 ML); (4) CLARIFYING 1 MIN AT 20DEGREES IN 10PERCENT SOLN. OF NA SUB2 SO SUB3; (5) WASHING 3-5 MIN AT 20DEGREES; (6) 2ND EXPOSURE FOR 1 MIN WITH A 500-W LAMP AT 1 M; (7) 2ND DEVELOPMENT 5-7 MIN AT 20DEGREES (SOLN. A: HYDROXYLAMINE 1.5, T-32 9, ANHYD. NA SUB2 SO SUB3 2, KBR 3 G, H SUB2 O TO 500 ML; SOLN. B: K SUB2 CO SUB3 75, PHENIDONE 0.2, ALPHA,NAPHTHOL 2 G, H SUB2 O TO 500 ML; 1:1 MIXT. OF A PLUS B), (8) FIXING 2-3 MIN AT 18-20DEGREES; (9) WASHING 2-3 MIN AT 18-20DEGREES.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--COLOR PHOTO DEVELOPMENT FOR DIAPOSITIVES -U-

AUTHOR-(03)-FILIN, V.N., ANDRIANOV, K.I., BELYAROVA, T.N.

COUNTRY OF INFO--USSR

SOURCE--POLIGRAFIYA 1970, 1 26-9

DATE PUBLISHED-------70

SUBJECT AREAS--METHODS AND EQUIPMENT

TOPIC TAGS--PHOTOGRAPHIC MATERIAL, COLOR PHOTOGRAPHY, PHOTOGRAPHIC EMULSION/(U)FT41 PHOTOGRAPHIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0724 STEP NO--UR/0543/70/001/000/0026/0029

CIRC ACCESSION NO--AP0134459

UNCLASSIFIED

USSR UDC 62[illegible].37:550.145.6

RIVLIN, L. A., SHIL'YAYEV, V. S.

"A Coherent Emitter"

USSR Author's Certificate No 243107, Filed 3 Apr 67, Published 10 Apr [illegible] (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10B366 P)

Translation: This Author's Certificate introduces a coherent emitter with [illegible] number of parallel IR junctions. To reduce dissipative power losses and achieve coherent summation of oscillations at the emitter output, the device utilizes synchronization by a channeling unit in the form of a section of polyhedral or rectangular waveguide, the square of the ratio of the sides of this waveguide being a whole number. The emitter has one transparent face and an external mirror. .. S.

1/1

S/019/62/000/008/113/121
A154/A126

AUTHORS: Yesenberlin, R. Ye., Kobzev, I. F., Andrianov, K. I., Aseyeva, I. N.

TITLE: A device for brazing articles in a gaseous medium

PERIODICAL: Byulleten' izobreteniy, no. 8, 1962, 78

TEXT: Class 49h, 33. No. 146639 (740113/24 of July 25, 1961). 1. A device for brazing articles in a gaseous medium of nitrogen and dissociated ammonia comprises an electric furnace and a gas-envelope feeding system. This includes a compressor, an ammonia dissociator, a cooler, a gas mixer and a drier with aluminum gel. It differs from others in that, to improve the gas purification and lower the temperature of brazing, it is fitted with a catalyst installed behind the mixer and filled with crushed dunite heated to a temperature of 300 - 400°C. 2. A device as in 1, but which, with the object of improving the purification of gas envelope from water vapors, is fitted with another drier containing phosphorus pentoxide.

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2/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0055622

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HYDROLYTIC POLYCONDENSATION OF MESI(OET) SUB2 CH SUB2 CH SUB2 OR (R IS MENTHYL) WITH 3PERCENT HCL SOLN. AT 50-60DEGREES GAVE (ROCH SUB2 CH SUB2 SIMEO) SUBN (ROCH SUB2 CH SUB2 SIMEO) SUBM. THE POLYCONDENSATION OF RO(CH SUB2) SUB3 SIMECL SUB2 IN THE PRESENCE OF NAHCO SUB3 AND A SMALL AMT. OF H SUB2 O GAVE 77.6PERCENT (RO(CH SUB2) SUB3 SIR PRIME) O) SUBN (I) (R PRIME EQUALS ME). SIMILARLY, O(SIME SUB2 CH SUB2 CH SUB2 CO SUB2 R) SUB2 (II) (OSIMECH SUB2 CHMECO SUB2 R) SUBN, (OSIME SUB2 CHMECO SUB2 R) SUBN, (OSIMECH SUB2 CH SUB2 CO SUB2 R) SUBN, (OSIME (CHMECO SUB2 R) SUBN (III), I (R PRIME EQUALS ET. OR PH), (ROCH SUB2 CH SUB2 SIMEO)SUBN, (ROCH SUB2 CH SUB2) SIO SUB1.5)SUBN, (RO(CH SUB2) SUB3 SIO SUB1.5) SUBN, (O SUB1.5 SICH SUB2 CHMECO SUB2 R) SUBN, AND O SUB1.5 SICH SUB2 CO SUB2 R) SUBN WERE PREPD. ALL THESE POLYSILOXANES ARE OPTICALLY ACTIVE AND (EXCEPT III) DO NOT DECOMPD. AT 200DEGREES-2 MM; II IS DISTILLABLE AT 205DEGREES-05 MM.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SYNTHESIS OF OPTICALLY ACTIVE POLY(MENTHOXYALKYL) AND POLY (MENTHOXYCARBONYL) POLYSILOXANES -U-

AUTHOR-(04)-ANDRIANOV, K.A., VOLKOVA, L.M., KLABUNOVSKIY, E.I., MAMEDOV, A.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN, SER. B 1970, 12(1), 6-10

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SILOXANE, POLYCONDENSATION, OPTIC ACTIVITY, CHEMICAL SYNTHESIS, ORGANOSILICON COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0924 STEP NO--UR/0460/70/012/001/0006/0010

CIRC ACCESSION NO--AP0055622

UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124377

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAFIC INFORMATION. THE POLYCONDENSATION OF SI((OSIMEPH) SUB3 OH) SUB4 GAVE A BENZENE SOL. POLYMER AND I (X EQUALS SI); SIMILARLY TI((OSIMEPH) SUB3 OH) SUB4 GAVE I (X EQUALS TI). THE ABOVE REACTIONS ARE THE SPECIAL CASES OF THE GENERAL REACTIONS IN WHICH X((OSIR SUB2) SUBN OH) SUB4 OR HOMOPOLYCONDENSED OR COPOLYCONDENSED WITH X(OR) SUB4 TO GIVE II, X((OSIR SUB2) SUBN Y) SUB4 ARE CONDENSED XCL SUB4 TO GIVE ANALOGOUS COMPDS., AND SI(NHR) SUB4 GIVES III. IN THIS WAY POLY(DIMETHYLSPIROCYCLOSILOXANES), POLY(METHYLPHENYLSPIROCYCLOSILOXANES), POLY(TITANIUMMETHYLPHENYLSPIROCYCLOSILOXANES), AND POLY(SPIROCYCLOALKYLSILAZANES) WERE PREPD. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--POLYMERS WITH SPIROCYCLIC MOLECULAR CHAINS -U-

AUTHOR--ANDRIANOV, K.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 347-50 (CHEM)

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMER, CYCLIC GROUP, POLYCONDENSATION, ORGANOSILICON COMPOUND, ORGANOTITANIUM, AMINE DERIVATIVE, MOLECULAR STRUCTURE, POLYSILOXANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0705 STEP NO--UR/0020/70/191/002/0347/0350

CIRC ACCESSION NO--AT0124377

UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112725

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HYDROLYTIC POLYCONDENSATION OF PHSICL SUB3 GAVE (PHSIO SUB1.5) SUBN (I), MOL. WT. SIMILAR TO 3 TIMES 10 PRIME4. THE DEPOLYMN. OF I WITH ME SUB3 SIOK, ET SUB3 SIOK, ME SUB2 (F SUB3 C-CH SUB2 CH SUB2)SIOK, OR THEIR MIXTS. IN XYLENE AT 140DEGREES, FOLLOWED BY REACTION OF THE OLIGOMERS WITH ME SUB3 SICL GAVE OLIGOMERS, SUCH AS ((ME SUB3 SIO) SUB2 SIPH) SUB2 O, II, III, OR IV. THE OLIGOMERS WERE PURIFIED BY DISTN. MORE COMPLEX OLIGOMERS GAVE ONLY LOW DISTN. YIELDS AND THEIR STRUCTURES WERE NOT ESTABLISHED. THESE OLIGOMERS ARE STABLE TO SIMILAR TO 350DEGREES. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PHENYLTRIALKYLSILOXANE OLIGOMERS WITH BRANCHED MOLECULAR STRUCTURE -U-

AUTHOR-(05)-TYERSKAYA, S.A., ANDRIANOV, K.A., CHERNOBROVKINA, M.N., TIKHONOV, V.S., ALANICHEV, V.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2), 339-46

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SILOXANE, HETEROCYCLIC OXYGEN COMPOUND, CONDENSATION REACTION, MOLECULAR STRUCTURE, BENZENE DERIVATIVE, CHEMICAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1735 STEP NO--UR/0079/70/040/002/0339/0346

CIRC ACCESSION NO--AP0112725

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116671

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HYDROLYSIS OF RSICL SUB3 (I) (R IS 4,MEC SUB6 H SUB4 (IA), 4,CLC SUB6 H SUB4, 3,MEC SUB6 H SUB4 (IB), ISO,PRCH:CH (IC), F SUB3 CCH:CH, ISOHEXYL, ISOPENTYL, ISO,BU, ISO,PR, PR, F SUB3 C(CH SUB2) SUB2, MECH:CH, NC(CH SUB2) SUB2, ET, OR H SUB2 C:CH) IN ET SUB2 O WITH H SUB2 O AT 24-6DEGREES GAVE POLYCYCLIC OLIGOMERS (II). THE CATIONIC POLYMN. OF II AT 240-5DEGREES IN THE PRESENCE OF KOH GAVE LADDER POLYSILOXANES (III). HOWEVER, THE POLYMN. OF I (R IS 2,MEC SUB6 H SUB4, PHCH SUB2, ISO,AMYL) HYDROLYSIS PRODUCTS DID NOT GIVE III DUE TO STERIC HINDRANCE. THE POLYMERS PREPD. FROM IA-C ARE SOL. IN ORG. SOLVENTS. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--POLYMERIZATION OF ORGANOTRICHLOROSILANE HYDROLYSIS PRODUCTS -U-

AUTHOR-(02)-ANDRIANOV, K.A., MAKAROVA, N.N.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(3), 663-70

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROLYSIS, ORGANIC SILANE, OLIGOMER, POLYMERIZATION, SILOXANE, STERIC HINDRANCE, SOLUBILITY, ORGANIC SOLVENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1206 STEP NO--UR/0459/70/012/003/0663/0670

CIRC ACCESSION NO--AP0116671

UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124560

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 44 G HYDROQUINONE WITH 80.96 G ET SUB3 N AND 52.2 G ME SUB2 SICL SUB2 IN CH SUB6 H SUB6 UNDER INERT ATM. GAVE IN 2.5 HR 68.4PERCENT PRODUCT, B. 220-86DEGREES, AFTER FINAL HEATING WITH 0.6 G ZNO IN VACUO AT 350-450DEGREES TO DEPOLYMERIZE THE INITIAL OLIGOMER. THE DISTD. MATERIAL YIELDED, ON CRYSTN. FROM C SUB6 H SUB6, 49.7PERCENT I, M. 108-11DEGREES, AND 12.7PERCENT II, M. 180-2DEGREES. THE ORIGINAL OLIGOMER IS A MIXT. OF HIOC SUB6 H SUB4 OSIME SUB2-P) SUBX CL UNITS. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTION OF DIMETHYLDICHLOROSILANE WITH HYDROQUINONE -U-

AUTHOR-(04)-ANDRIANOV, K.A., VARLAMOV, A.V., KHANANASHVILI, L.M., RUBINA, N.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 611-13

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYNUCLEAR HYDROCARBON, BENZENE DERIVATIVE, ORGANIC SILANE, CHLORINATED ORGANIC COMPOUND, HYDROQUINONE, HETEROCYCLIC BASE COMPOUND, OLIGOMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0899 STEP NO--UR/0079/70/040/003/0611/0613

CIRC ACCESSION NO--AP0124560

UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0137779

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM EXAM. OF THE DIRECT SYNTHESIS OF CHLOROSILANES OVER A CU,SI MASS, WHICH WAS EXAMD. REPEATEDLY DURING THE REACTION FOR ITS CONTENT OF CD, CU AND ZN, IT WAS SHOWN THAT SYNTHESIS OF PHENYLCHLOROSILANES IS DIRECTLY THE RESULT OF FORMATION OF CUCL IN THE REACTION OF PHCL WITH CU, FOLLOWED BY REDN. BY SI. THE CL TRANSFER TO CU, THEN TO SI, OCCURS AS A GENERAL SYMPTOM OF DIRECT SYNTHESIS OF CHLOROSILANES IN GENERAL. PROMOTERS IN THE FORM OF ZN OR CD OR THEIR CHLORIDES IN THE REACTION MASS APPEAR TO FUNCTION THROUGH THE INTERMEDIATE FORMATION OF MONOCHLORIDES OF ZN AND CD AND TRANSFER OF THE CL FROM CU TO THESE. THIS APPEARS TO BE MORE FAVORABLE ENERGETICALLY THAN IS THE FORMATION OF CUCL FROM CU PROPER AND PHCL. NUMEROUS KINETIC AND YIELD DATA WERE SHOWN GRAPHICALLY.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--ALKYL, ARYL, CHLOROSILANE FORMATION DURING THE DIRECT REACTION OF ALKYL, ARYL, CHLORIDES WITH SILICON. 7. CHLORINE TRANSFER MECHANISM IN

AUTHOR-(05)-TORETSKAYA, R.A., GOLUBTSOV, S.A., ANDRIANOV, K.A., MOSIN, A.M., PASTUKHOVA, Z.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (6), 302-3.

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CHLORINATED ORGANIC COMPOUND, SILANE, BENZENE DERIVATIVE, ZINC COMPOUND, CADMIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1305 STEP NO--UR/0062/70/000/006/0302/0303

CIRC ACCESSION NO--AP0134579

UNCLASSIFIED

2/2 029 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0137002

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLY(ORGANOSILOXANES) WITH FUNCTIONAL GROUPS ARE HARDENED QUICKLY AND AT LOW TEMPS. WITH AN ACIDIC CATALYST OF PB METHYLPHOSPHONATE OR DIBUTYLTIN. FACILITY: INSTITUT ELEMENTOORGANICHESKIKH SOYEDINENIY AN SSSR.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--HARDENING OF POLY,ORGANOSILOXANES -U-

AUTHOR-(03)-ANDRIANOV, K.A., MANEVICH, I.YA., TELESHEVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,448

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMER, SILOXANE, CHEMICAL PATENT, ORGANOLEAD COMPOUND, ORGANOTIN COMPOUND, HARDNESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1762 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137002

UNCLASSIFIED

Acc. Nr. AP0048844 Abstracting Service: CHEMICAL ABST. Ref. Code UR0459

91011q **Determination of the composition of the reaction mixture in the polymerization of organocyclosiloxanes by means of gel chromatography.** Andrianov, K. A.; Zhdanov, A. A.; Zavin, B. G.; Sunekants, T. J. Inst. Elementoorg. Soedin., Moscow, USSR. *Vysokomol. Soedin., Ser. A* 1970, 12(1), 20-5 (Russ). The contents of high b.p., low mol. wt. organocyclosiloxanes (present in a mixt. with polymers), e.g., octaphenylcyclotetrasiloxane, hexaphenylcyclotrisiloxane, 1,3,5,7-tetramethyl-1,3,5,7-tetraphenylcyclotetrasiloxane (I), 1,1,5,5-tetramethyl-3,3,7,7-tetraphenylcyclotetrasiloxane (II), 1,1,3,5,7-pentamethyl-3,5,7-triphenylcyclotetrasiloxane, 1,2,3,5,5,5-hexamethyl-7,7-diphenylcyclotetrasiloxane, 1,3,5-trimethyl-1,3,5-triphenylcyclotrisiloxane, heptamethylphenylcyclotetrasiloxane, octamethylcyclotetrasiloxane (III), hexamethyltrisiloxane, ferrocene, hexamethyldisiloxane, and SKTV-1 (polydimethylsiloxane) rubber (mol. wt. 450,000) were studied by gel chromatog. The distribution factors (K_d) were calcd. from elution vols. (V_e) (C_6H_6 eluent). The K_d and V_e were inversely proportional to the mol. wt., e.g., I and II had identical V_e and K_d. Elution of SKTV-1 and III on a 96:4 styrene-divinylbenzene copolymer gave satisfactory results and was highly reproducible. A good correlation was obtained between gel chromatog. and gravimetric anal. of III. A ratio between gel chromatographic peaks gave a good indication of monomer consumption during polymn.

CKJR

REEL/FRAME
19800611

USSR

ANDRIANOV, K. A., et al., Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1560-1565

Monomers containing alkoxy or aroxy groups at the phosphorus are the least stable, the monomer with two phenyl radicals the most stable. The monomer containing a methylene-o-carboranene group at phosphorus lowers this group during thermooxidative degradation.

2/2

USSR

UDC 547.245+547.241+547.244

ANDRIANOV, K. A., VARLAMOVA, N. V., KOLCHINA, A. G., [illegible], V. V., and SHAPATIN, A. S.

"Synthesis and Study of Properties Bis(or [illegible]phosphinoxy) [illegible] Titanium"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp [illegible]

Abstract: The authors previously studied the synthesis of some bis(or [illegible] phosphinoxy)dibutoxy titaniums by the condensation of [illegible] titanium with phosphorus monoacids or acid monochlorides. In the present article the authors report using an analogous method to obtain [illegible] compounds contain-ing a catecholoxy or methylene-o-carborane [illegible]. The synthesis of the former was through the corresponding [illegible] chloride, the latter through 1,2-methylene-o-carboranenorthophosphoric acid. The resistance of these and the previously synthesized compounds to thermooxidative degradation was studied. It was found that thermooxidative degradation is accompanied by loss of the organic part of the monomers. Given the same titanium framework, the comparative resistance to thermooxidative degradation for similar com-pounds is determined by the stability of the organic [illegible].

1/2

UDC 547.1'128+661.718.1

USSR

ANDRIANOV, K. A., VASIL'YEVA, T. V., and ZHUKOVA, T. K., Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov

"Condensation of Alkyltriethoxysilanes with Hexylphosphinic Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1565-1567

Abstract: The authors studied reactions of the heterofunctional organosilicon compounds of alkyltriethoxysilanes with hexylphosphinic acid and its acid chloride. It was found that the yields of the cyclic and polymeric products depend on the size of the substituent at silicon.

1/1

USSR

UDC 678.029+661.66

ANDRIANOV, K. A., SOSEDOV, V. P., PATALAKH, I. I., KROTOV, A. I., RAZUMOV, L. L., and KAVEROV, A. T.

"Some Features of the Formation of Novel Thermally Stable Reinforced Plastics"

Moscow, Doklady Akademii Nauk SSSR, Vol200, No 6, Oct 71, pp 1343-1344

Abstract: One of the most important problems in the area of chemistry and physics of solid bodies concerns development of mechanically strong thermally stable materials. The reinforced materials currently available are either not sufficiently strong or thermally instable. With this in mind, experiments were carried out in which glass fiber KN-11 and a hydrocarbon fiber were treated with siliconorganic polymer (polymethyloxydiphenylpropanosiloxane) followed by thermal activation in a reducing medium and in hydrocarbon media. In this fashion materials with high specific strength at elevated temperatures were obtained, exceeding considerably the properties of known construction materials.

1/1

USSR

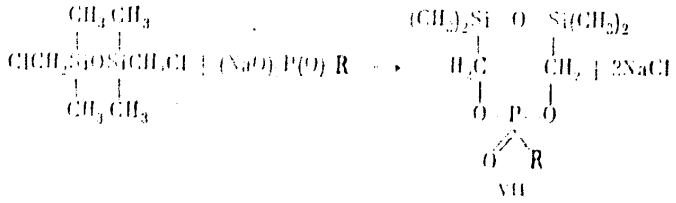
UDC 547.12'8-661.718.1

ANDRIANOV, K. A., VASIL'YEVA, T. V., and FOMINYKH, YE. S.

"The Condensation of Disodium Alkylphosphonates With 1,3-Dichloromethyltetramethyldisiloxanes and Dichlorodiphenylsilanes"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 4, 1972, pp 850-854

Abstract: The reaction of disodium salts of alkyl phosphonic acids with organosilicon compounds containing either a chlorinated aliphatic radical or a chlorine bonded directly to the silicon was studied. The two types reactions are as follows:



VII

ANDRIANOV, G. O.

JPRS 57631
30 Nov. 1972

METAL-DIELECTRIC PHASE TRANSITIONS [illegible] ALLOYS IN [illegible] FIELDS

[Article by N. B. Brandt, Ye. A. Svistova, Moscow State University, Physics Department, pp 8-10]

Presented in this paper are the results of a study of the [illegible] resistance of specimens with small controlled overlapping of [illegible] controlled energy slit, i.e., of metallic and semiconductor [illegible] bismuth and antimony in which the antimony concentrations [illegible], in pulsed magnetic fields up to 750 ke in the [illegible] temperature [illegible], the purpose of which was to discover effects related to qualitative changes in the energy spectrum of the specimens in the ultraquantum region of magnetic fields.

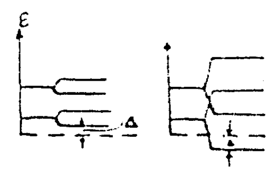


Figure 1.

Quantization of carrier energy and the spin distribution of the energy levels in the magnetic field lead to displacement of the boundaries of the energy zones (Figure 1).

In the ultraquantum region the displacement of zone boundaries (Δ) reaches a magnitude comparable to or greater than the Fermi energy in the zones of the metals or the energy slit in semiconductors. Here electron transitions may occur, depending on the ratio of the spin and orbital masses of the carriers.

ABSTRACTS OF REPORTS PRESENTED AT THE FIRST ALL-UNION
CONFERENCE ON METAL-DIELECTRIC PHASE TRANSITIONS

Moskovskoye Universitet, Moscow, pp 8-10, [illegible]

CONTENTS

Acc. Nr: AP0049945 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR0068

101893k **Use of clear indene-coumarone resins as corrosion-resistant coatings.** Andrianov, E. G.; Matveeva, I. E.; Gavaga, V. S. (Zhdanov. Koksokhim. Zavod, Zhdanov, USSR). *Koks Khim.* **1970**, (1), 47-9 (Russ). Mixts. of indene-coumarone resin (I) with ED-6 (epichlorohydrin-diphenylolpropane epoxy resin) gave excellent coatings for metals. The typical coating formulation contained I 22.5, ED-6 22.5, ligroine 47.0, PhMe 4.0, and acetone 4.0 parts. The formulation, with or without a pigment, applied to steel precoated with an antirust compn. (soln. of powd. Zn in 40% H_3PO_4), dried in 24 hr at 20° and had 50 kg/cm impact resistance and satisfactory hardness. The coating resisted the atm. conditions of a coking plant, and resisted aq. 10-15% NaOH at 25-30°, 1-10% NaCNS, 1-10% H_2SO_4, and hot plant water. Less expensive formulations contg. a 2:8 or 3:7 wt. ratio of ED 6 to I can be used in less crit. applications. CPJR

REEL/FRAME
19801881

USSR

ANDRIANOV, D. G., et al., Doklady Akademii Nauk SSSR, Vol 201, No 4, Dec 71, pp 884-886

Ge and Si lattices are about the same, analogously to the Ge-H, Si-H bond lengths. If the interaction of μonium with the ligands of silicon and germanium lattice resembles the interaction during formation of Si-H and Ge-H bonds, it is reasonable to expect that the μonium should be larger in the silicon lattice than in the germanium lattice. A conclusion is reached that the radius of hydrogen dissolved in silicon should be somewhat larger than in germanium.

USSR UDC 541.12.012.2

ANDRIANOV, D. G., OBUKHOV, YU. V., FIRSOV, V. G., FISTUL', V. I., State Scientific Research and Development Institute of Rare Metal Industry, Institute of Theoretical and Experimental Physics, Moscow

"Dimensions of the Hydrogen Atom in Semiconductors and Dielectrics"

Moscow, Doklady Akademii Nauk SSSR, Vol 201, No 4, Dec 71, pp 884-886

Abstract: A theoretical discussion based on literature reports is carried out in an attempt to find correlations between the Si-H and Ge-H bond characteristics and dimensions of atomic μonium and atomic hydrogen (both by physical and chemical properties an atom of μonium is like a hydrogen atom). No original experimental work is reported. It is believed that the μonium (and consequently the atomic hydrogen) are located in the internodal spaces of the crystalline lattice of germanium and silicon. The μonium was found to have a decreased energy of superfine interactions which is believed to be due to its interaction with neighboring atoms in the crystalline lattice -- evidently the μonium electron belongs for a certain time concurrently to the μ^+-meson and to the ligand. Geometrical characteristics of the internodal spaces in which the μonium and hydrogen are located in the

1/2

2/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120440

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCE OF MU E DECAY POLARIZATION ON LONGITUDINAL MAGNETIC FIELD STRENGTH IS MEASURED IN SILICON SINGLE CRYSTALS. THE HYPERFINE SPLITTING ENERGY OF THE MUONIUM ATOM IN THE CRYSTAL LATTICE DIFFERS FROM THE VACUUM VALUE AND CORRESPONDS TO A MUONUIM SIZE R EQUALS (9,719 PLUS OR MINUS 9,016) ANGSTROM.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF THE CRYSTAL LATTICE OF SILICON ON THE HYPERFINE SPLITTING ENERGY OF MUONIUM -U-

AUTHOR-(05)-ANDRIANOV, D.G., MINAYCHEV, YE.V., MYASISHCHEVA, G.G., OBUKHOV, YU.V., RUGANOV, V.S.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 6, PP 1896-1898

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CRYSTAL LATTICE, SILICON, SINGLE CRYSTAL, LONGITUDINAL MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1728 STEP NO--UR/0056/70/058/006/1896/1898

CIRC ACCESSION NO--AP0120440

UNCLASSIFIED

UDC 621.315.592

USSR

ANDRIANOV, D.G., BRANDT, N.B., ICON, E.R., FISTUL', V.I., CHUDINOV, S.M.

"Shubnikov--De Haas Effect In Heavily Doped N-Type GaAs"

Fizika i tekhnika poluprovodnikov, Vol 5, No 12, Dec 1971, pp 2285-2291

Abstract: The oscillations of the magnetoresistance of n-type GaAs doped with Te are studied in the interval of concentrations n_H of electrons from $0.93 \cdot 10^{18}$ to $2.75 \cdot 10^{10}$ cm^{-3} in magnetic fields to 70 kiloersted at temperatures of $1.9 \div 4.2^{\circ}$ K. Anisotropy of the isoenergetic surface at a point Γ of the Brillouin zone is revealed, increasing with an increase of the concentration of electrons. With $n_H = 2.75 \cdot 10^{18}$ cm^{-3} the relative anisotropy of the extremal cross-sections of the isoenergetic surface amounts to ~ 2 percent. A break is observed in the dependences of the number of Landau levels on the magnitude of the reversed magnetic field, which is interpreted as a consequence of the two-sheeted structure of the isoenergetic surface at a point Γ and of the intraband magnetic breakdown between the two cross-sections of this surface which are similar with respect to area. The Dingler temperature, the cyclotron masses, the Hall mobility, and the Dingler mobility are determined. State Scientific-Research And Planning Institute Of The Rare Metal Industry, Moscow (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti, Moskva); Moscow State University imeni M.V. Lomonosova. Received by editors 31 March 1971. 6 fig. 2 tab. 11 ref.

1/1

USSR

UDC 621.315.592

ANDRIANOV, D. G., SAVEL'YEV, A. S., FISTUL', V. I., State Scientific Research and Planning and Design Institute of the Rare Metals Industry of Moscow

"Magnetic Susceptibility of Gallium Arsenide Strongly Alloyed with Tellurium"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 5, 1972, pp 853-857

Abstract: The experimental setup and results are presented from an investigation of the magnetic susceptibility of gallium arsenide alloyed with tellurium in the concentration range from $3 \cdot 10^{17}$ to $1.4 \cdot 10^{19}$ cm -3. The measurements were taken by the Faraday method in the temperature range of 4.2-300°K. The existence of paramagnetic centers was detected in the low-temperature range near the temperature of liquid helium, although the investigated samples did not contain impurity atoms with unclosed d or f-shells. The paramagnetism was temperature-dependent and caused by the presence of the admixture atoms. The concentration of the magnetic centers as a function of the Hall concentration of the charge carriers is described by a curve with peaks. Curves are presented showing the dependence of the number of paramagnetic centers on the degree of alloying and the effect of the nature of the impurity in the Te, Se and S series on the negative reluctance in GaAs. Heat treatment converting the tellurium atoms to different states in the crystal lattice also changes the concentration of the paramagnetic centers.

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USSR

ANDRIANOV, D. G., et al., Moscow, Pis ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 17, No 9, 5 May 73, pp 494 - 498

of the exchange interaction of the quasi-localized moments through electron conductivity at the Fermi level, leading to the development of long range magnetic order and the formation of an intracrystalline field.

2/2

USSR

ANDRIANOV, D. G., BRANDT, N. B., ION, E. R., FISTUL', V. M., and CHUDINOV, S. M.

"A New Commutation Effect in InSb"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 17, No 9, 5 May 73, pp 494 - 498

Abstract: Detailed studies of Shubnikov-de Gaaz oscillations in N-type InSb monocrystals alloyed with Te at 10^{19} cm^{-3} indicate a commutation effect for a narrow range of carrier concentrations. Within this range a reversal of magnetic field direction with respect to electric current direction at low temperatures produces a qualitative change in the nature of oscillatory relationships. The nature and strength of the effect are dependent on the plane orientation of the crystal with respect to the magnetic field (which is always perpendicular to the electric current).

The phenomenon can be explained by postulating quasi-localized magnetic moments related to some virtual (resonant) levels, which cause changes in the law of dispersion in the conductivity zone of InSb in the neighboring energy region. The passage of a Fermi level (due to alloying or the effect of external pressure) through these resonance levels is accompanied by: a) their virtual saturation and the development of quasi-localized magnetic moments; b) a maximum

2/2 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125323

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT IONIC STRENGTH EXTRAPOLATED TO 0, THE INSTABILITY CONSTS. OF ANION COMPLEXES OF THE TITLE ACIDS ARE 1.30 TIMES 10 PRIME13 NEGATIVE AND 1.42 TIMES 10 PRIME12 NEGATIVE, RESP. IN DILD. AQ. SOLNS., THESE ACIDS ARE COMPLETELY IONIZED. THE STUDY WAS PERFORMED POTENTIOMETRICALLY.

UNCLASSIFIED

1/2 C19 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--IONIZATION AND STABILIZATION OF TRITIRONGERMANIC AND TRIGALLATOGERMANIC ACIDS -U-

AUTHOR-(02)-ANDRIANOV, A.M., KORYUKOVA, V.P.

A

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 445-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IONIZATION, IONIC BONDING, GERMANIUM COMPOUND, IRON COMPOUND, GALLIUM COMPOUND, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1702 STEP NO--UR/0078/70/015/002/0445/0449

CIRC ACCESSION NO--AP0125323

UNCLASSIFIED

2/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136251

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 25DEGREES, COMPARATIVE POTENTIOMETRIC TITRN. PROVED A COMPLETE 1ST IONIZATION OF THE ACID. THE 2ND IONIZATION CONST. IS 6.10 TIMES 10 PRIME NEGATIVE 3. INSTABILITY CONST. OF TANNIN GE COMPLEX AT 25DEGREES IS 7.85 TIMES 10 PRIME NEGATIVE 8.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--IONIZATION AND STABILITY OF TANNINGERMANIC ACID -U-

AUTHOR-(02)-ANDRIANOV, A.M., KORYUKOVA, V.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 450-4

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TANNIC ACID, GERMANIUM COMPOUND, COMPLEX COMPOUND, CHEMICAL STABILITY, IONIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0817 STEP NO--UR/0078/70/015/002/0450/0454

CIRC ACCESSION NO--AP0136251

UNCLASSIFIED

USSR UDC 621.373.2

ANDRIANOV, A. M., ALEKSEYEV, Yu. A., BAZILEVSKAYA, O. A., BARYSHEV, V. L., and KRASKOV, V. A.

"High-Voltage Pulse Oscillator"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No. 33, 1971, p 184

Abstract: The oscillator contains a nonuniform forming line with distributed parameters, a firing block, and a load. The line is made of two plane circular electrodes with a common axis of symmetry. Between them is a dielectric, with azimuthally symmetrical dischargers around the line's outer periphery; the load is connected through a ring insulator to the central region of the line. The dielectric constant is a function of the electric field intensity. High power and short rise time of the pulses are the features of the device. A sketch of the device is given.

1/1

2/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124493

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE COOXIDN. OF PROPYLENE (I) AND ACH BY 2:3:1 O I ACH AT 140DEGREES, THE USE OF DIMETHYL PHTHALATE (II) AS SOLVENT MARKEDLY INCREASED THE SELECTIVITY OF OXIDN. TOWARDS THE FORMATION OF I OXIDE FROM I AND ACOH FROM ACH; IN AN OPEN SYSTEM, THE DEGREES OF CONVERSION OF I TO I OXIDE AND ACH TO ACOH WERE 23 AND 17.5PERCENT RESP., AND THE FORMATION OF PEROXIDES WAS LESS THAN 0.2 VOL PERCENT. WHEN THE OXIDN. WAS CARRIED OUT IN II, AN INCREASE IN THE TEMP. (BETWEEN 110 AND 170DEGREES) REDUCED THE TIME NEEDED TO OBTAIN THE MAX. I OXIDE CONCN. FROM 160 TO 80-90 MIN, BUT ABOVE 140DEGREES THE TEMP. HAD LITTLE EFFECT ON YIELD. THE USE OF OTHER SOLVENTS (PHCL, PHNO SUB2 PHET, PHPR ISO, SILICON OIL, TETRADECANE) GAVE MORE PEROXIDES AND LITTLE I OXIDE.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ROLE OF THE SOLVENT IN THE COOXIDATION OF PROPYLENE AND ACETALDEHYDE AT ATMOSPHERIC PRESSURE -U-

AUTHOR-(02)-ANDRIANOV, A.A., CHERNYAK, B.I.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(3) 175-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--OXIDATION, PROPYLENE, ALDEHYDE, SOLVENT ACTION, PHTHALATE, PEROXIDE, ORGANIC OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0826 STEP NO--UR/0064/70/046/003/0175/0177

CIRC ACCESSION NO--AP0124493

UNCLASSIFIED

USSR UDC 542.938:661.718.1

ANDREYEVA, L. S., ANDRIANOV, A. A., BEL'SKIY, V. YE., VAVILOVA, M. F., GURYLEV, E. A., and NIKONOROV, K. V., Institute of Organic and Physical Chemistry imeni A Ye. Arbuzov, Academy of Sciences USSR

"Hydrolysis of Dimethyl-(1-acetoxy-2,2,2-trichloroethyl)phosphonate"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 10, Oct 71, pp 2336-2338

Abstract: Chloracetophos -- diemthyl-(1-acetoxy-2,2,2-trichloroethyl) phosphonate -- is a fungistatic agent. It undergoes hydrolysis easily losing its physiological activity. There are three possible routes for its hydrolysis, and it was established that all three occur simultaneously, the acetic acid, hydrochloric acid, and methanol being formed in the process. The hydrolysis is dependent on the temperature and pH -- it accellerates rapidly with the increase of pH. The overall rate constants for the initial reaction period were calculated to be 1.2×10^{-3}, 9.8×10^{-3}, and 4.9×10^{-2} min^{-1} at 50, 70 and 90° respectively.

1/1

USSR

ANDRIANKIN, E. I., et al., Zhurnal Prikladnoy Makhaniki i Tekhnicheskoy Fiziki, No 6, 1970, pp 98-106

sensitivity of liquid explosions to impact, etc. The analysis of these questions is dealt with by a number of papers in which the collapse of a spherical cavity is investigated. The present paper deals rather with the case of an impact with a velocity of w_o upon an angular layer of liquid with a thickness of h_o with an external radius a and an internal radius b. The solution of this problem is somewhat more complex than in the case of the collapse of a spherical bubble due to the presence of the axial component of velocity, the finite value of the striker radius a, and the layer thickness, which is variable with respect to time.

2/2

USSR

ANDRIANKIN, E. I., BOBOLEV, V. K., and DUBOVIK, A. V. (Moscow)

"The Collapse of a Cylindrical Cavity in a Layer of Liquid Upon Impact"

Moscow, Zhurnal Prikladnoy Makhaniki i Tekhnicheskoy Fiziki, No 6, 1970, pp 98-106

Abstract: The article deals with the case of an impact upon a thin annular layer of liquid with a gas-filled cavity.

The solution of the problem is reduced to the integration of a system of two conventional first-order differential equations. A qualitative analysis of the equations is carried out, and some precise solutions are found. Note is taken of cases of pulsation of the cavity, the influence of counterpressure and viscosity is investigated. The obtained experimental data coincide with the numerical calculations conducted in the paper.

The problem of the collapse of a cavity liquid is one of the fundamental problems of hydrodynamics. It is not only of theoretical but also of practical interest, since the collapse of cavities takes place frequently in the lubrication layer of bearings, in cavitation, in testing of the

ANDRIANKIN, E. I.

III. SHOCK WAVES IN LIQUIDS

Andriankin, E. I., V. K. Bobolev, and A. V. Dubovik. Collapse of an elliptic cavity and explosive initiation in a liquid layer under shock effect. ZhPMTF, no. 5, 1971; 78-85.

Analytical and experimental results are given on the effect of shock excitation of a combustible liquid volume. Criteria are developed for the threshold conditions under which a nominally spherical fluid volume shifts to an elliptical form, and on further compression develops into a cumulative jet; in the limit this results in detonation from adiabatic heating of gas evolved in the volume. Test data on shock generation of jets in liquid nitroglycerine are included, and show qualitative agreement with theoretical results.

Shtessel', E. A., K. B. Pribytkova, and A. G. Merzhanov. A numerical solution to the problem of a thermal explosion, with free convection taken into account. FGiV, no. 2, 1971, 167-178.

The authors cite previous works in which the effect of free convection on a gas explosion process is expressed in terms of the Rayleigh (Ra) and Frank-Kamenetsky (δ) criteria. The analysis is extended here to the case of liquid fuel combustion, and is presented as a supplement to earlier experimental work by Merzhanov and Shtessel' (FGiV, no. 1, 1971) in which an empirical correlation between Ra and δ was obtained. The model used assumes an ideal stationary fluid in a uniform semi-infinite vessel; gas evolution is neglected. The results are shown graphically, indicating the conditions under which convection will or will not affect the detonation process.

USSR

ANDRIANKIN, E. I., et al., Fizika goreniya i vzryva, Vol 8, No 3, 1972, pp 408-416

on the periphery of the striker where the pressure is close to normal. Therefore, consideration of the dependence of the viscosity on the pressure does not lead to a noticeable increase in the maximum temperature.

2/2

USSR

UDC 662.217.7

ANDRIANKIN, E. I., BOBOLEV, V. K., DUBOVIK, A. V., Moscow

"Heating of a Liquid Explosive Layer under Impact"

Novosibirsk, Fizika goreniya i vzryva, Vol 8, No 3, 1972, pp 408-416

Abstract: A study was made more precisely to define the maximum temperature of a liquid explosive layer under impact. The kinetics of this phenomenon are explained and the experimental procedure and theoretical analysis are described.

The layer of investigated liquid was placed between two coaxial steel rollers 15 mm in diameter. A wire strain gage was wound on the lower roll. Impact was applied to the upper roll by a 5 kg weight at a rate of 1-2 m/sec. Oscillograms are presented for various impact rate demonstrating that the maximum pressure on impact p_{max} is very close to p_j forthe case of "idle" impact.

When calculating the maximum temperature in the liquid explosive layer under impact it is necessary to consider not only the thermal conductivity but also the relation between the viscosity of the liquid and the temperature. For standard laboratory experimental conditions, the calculated values of the maximum temperature were an order lower than for adiabatic warming and did not exceed the characteristic ignition point of nitroglycerine. Although the viscosity of the liquid explosive also depends on pressure, the maximum temperature is reached

2/2 021 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0108776

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDITION OF THE METABOLIC PROCESSES WAS STUDIED IN 38 PATIENTS WITH MYOCARDIAL INFARCTION FROM THE 3D TO THE 20TH DAY FROM THE ONSET OF THE DISEASE. IT WAS FOUND THAT METABOLIC ALKOLOSIS WAS CLOSELY ASSOCIATED WITH POTASSIUM DEFICIENCY IN PATIENTS WITH MYOCARDIAL INFARCTION AND A SMALL HYPERPOTASSEMIA AND MODERATE METABOLIC ACIDOSIS DEVELOPED IN SOME OF THE PATIENTS WHO HAD BEEN GIVEN GLUCOSE, INSULIN AND POTASSIUM. THE AUTHORS RECOMMEND A DIFFERENTIAL APPROACH TO THERAPY OF PATIENTS WITH MYOCARDIAL INFARCTION WITH POTASSIUM SALTS ON THE BASIS OF CLINICAL DATA AND INVESTIGATION OF INTRARELATION BETWEEN THE ACID BASE AND ELECTROLYTE METABOLISM.

FACILITY: 1,E KLINICHESKOYE OTDELENIYE INSTITUTA KARDIOLOGII IM. A. L. MYASNIKOVA AMN SSSR, MOSCOW.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--ELECTROBOLITES AND METABOLIC DISORDERS OF THE ACID BASE BALANCE OF THE BLOOD OF PATIENTS WITH MYOCARDIAL INFARCTION -U-

AUTHOR-(02)-IOSAVA, K.V., ANDRIADZE, N.A.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 4, PP 63-69

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEART DISEASE, ALKALOSIS, HYPERKALEMIA, GLUCOSE, INSULIN, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0561 STEP NO--UR/0504/70/042/004/0063/0069

CIRC ACCESSION NO--AP0108776

UNCLASSIFIED

Forming

USSR

ANDREYUK, L. V., TYULENEV, G. G., PRITSKER, B. S.

"Analytic Dependence of Deformation Resistance of Steels and Alloys on Chemical Composition"

Moscow, Stal', No 6, Jun 72, pp 522-523.

Abstract: Years of study of 54 steels and alloys, from the simplest carbon and low-alloy steels to complex heat-resistant alloys, containing the most important chemical elements in widely varying quantities, are summarized in formulas which can be used to calculate deformation resistance of these steels as a function of deformation rate, degree and temperature if only the chemical compositions of the alloys are known. This reliable and universal analytic dependence of deformation resistance on chemical composition of steels and alloys allows rapid calculation of required rolling modes for various steels and alloys without preliminary testing.

1/1

USSR

ANDREYUK, L. V., and TYULENEV, G. G., Stal', No 11, Nov 72, pp 1015-1016

deformation has a significant effect on deformation resistance. The plastic properties of the steel depended little on deformation rate and were significantly higher than for direct heating (ε>60%).

USSR UDC 621.771.014

ANDREYUK, L. V., and TYULENEV, G. G.

"Deformation Resistance and Plastic Properties of Steel During Thermomechanical Treatment"

Moscow, Stal', No 11, Nov 72, pp 1015-1016

Abstract: Thermomechanical treatment is one method of producing materials with strengths of up to 300 kg/mm^2: heating to about 1100°C, rapid cooling to 500-600°C rolling at this temperature with significant hardening of the supercooled austenite, quenching, during which the martensite formed inherits the hardening of the austenite, and tempering. The Chelyabinsk Scientific Research Institute for Metallurgy tested specimens of type 30Kh5MVNGS steel on the plastometer. The tests were performed in the supercooled austenitic state and modeled thermomechanical treatment. The studies showed that in the super-cooled austenitic state, the values of σ_u are indepdent of deformation rate u over the range of change 0.001-30 sec^{-1} and are virtually independent of temperature in the 500-600°C range. The mean value of deformation resistance of this steel in the supercooled austenitic state is near constant, at 38.9±1.8 kg/mm^2 where c=0.1 with confidence level 0.95. The degree of

1/2

USSR

UDC: 621.374.32:621:382.82

BELOV, A. F. and DOTSENKO, Yu. Yu.

"Computing Devices Using Integrated Circuits"

Tr. Soyuz. NII priborostr. (Transactions of the Union of Scientific Research Institutes of Instrument Construction) No 18, 1972, pp 74-85 (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 2, 1973, Abstract No 2A495)

Translation: An analysis is given of some computers using integrated circuits with mounted elements in hybrid-film arrangements as well as without mounted elements. Six illustrations. Bibliography of six. Resume

1/1

USSR

UDC: 621.374.32

BELOV, A. F., DOTSENKO, Yu. Yu., and KURKOV, Ye. V.

"Binary-Decimal Counter"

Avt. sv. SSSR, Kl. H 03 k 23/00, No 320061, zayavl. 17.07.70 opubl. 4.01.72 (Author's Certificate, USSR, class H 03 k 23/00, No 320061, claimed 17 July 1970, published 4 January 1972) (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 2, 1973, Abstract No 2A500P)

Translation: A binary-decimal counter containing four triggers, a shaper, and two transistorized switches in a common emitter circuit is proposed. Two illustrations

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USSR

UDC: 621.374.32

ANDREYTSEV, P. P., BELOV, A. F., KURKOV, Ye. V., and DOTSENKO, Yu. Yu.

"Problems in the Design of Digital Computer Circuits"

Tr. Soyuz. NII priborostr. (Transactions of the Union of Scientific Research Institutes of Instrument Construction) No 18, 1972, pp 65-73 (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 2, 1973, Abstract No 2A494)

Translation: Problems of improving the operational speed and reliability of single-channel computer devices as the result of the use of more optimal unit circuitry are considered. Three illustrations, bibliography of four. Resume

1/1

USSR

UDC 621.771.03

ANDREYUK, L. V.

"Deformation Resistance of Steels and Alloys in the Cold State"

Moscow, Stal', No 8, Aug 73, pp 731-734

Abstract: A comparatively simple method of determining the deformation resistance of steels and alloys in the cold state has been proposed where cold state deformation is determined relation to the results of tensile tests on one sample of each steel and alloy and analytically processed on a computer. The steels and alloys tested were: EI437bU-VD, OOOKh21N16AG8, Kh17N13M2T, Kh18N10T, 1Kh17N2, 3Kh13, SP33-VD, EI712, VL1-VD, 12Kh2N4VA, 25KhN2GMTA-VD, 14KhN2GMR, 39KhNMYuA, 20KhNFBR, EP182, ShKh15, 65G1, 65G, 50, 45, 40, 20G1, 25, 20, St. 3sp and steel 10. The chemical composition of these steels and alloys is presented in a table. The deformation resistance and tensile strength of the same steels and alloys are presented in a second table with the addition of VKS1-VD, Monel, EI654, and EI961. An empirical formula was proposed for determining deformation resistance taking into account the yield strength of a material in the initial state and the carbon and chromium content in it. Three figures, four tables, two bibliographic references.
1/1

USSR

UDC: 621.374.32

ANDREYTSEV, P. P., BELOV, A. F., KURKOV, Ye. V., and DOTSENKO, Yu. Yu.

"Problems in the Design of Digital Computer Circuits"

Tr. Soyuz. NII priborostr. (Transactions of the Union of Scientific Research Institutes of Instrument Construction) No 18, 1972, pp 65-73 (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 2, 1973, Abstract No 2A494)

Translation: Problems of improving the operational speed and reliability of single-channel computer devices as the result of the use of more optimal unit circuitry are considered. Three illustrations, bibliography of four. Resume

1/1

AM0033076

The book deals with basic methods for quantitative determination of reliability of electric units, a brief analysis of causes of malfunctions and the most reliable elements of low-power diesel-electric units...

It was written for engineering-technical personnel engaged in development, production and operation of electric units .

2

19701466

Acc. Nr.: AM0033076 Ref. Code: 4R0000

Andreykov, V. A.; Yemel'yanov, I. A.

Reliability of Diesel-Electric Units and Their Automatic Systems (Nadezhnost' dizel'-elektricheskikh agregatov i ikh sistem avtomatizatsii) Moscow, Mashinostroyeniye, 1970, 295 pp (SL:1813)

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Reel/Frame 19701465

18

UDC: 621.375.121

USSR

LEKISHVILI, K. M., AZIDZIGURI, A. A., KHAZARADZE, O. L., GELOVANISHVILI, G. S., ANDREYEVSKIY, YU. S., PEREGUDOV, V. P., Tbilisi Department, Electrotechnical Scientific Research Institute

"A Transistorized Wide-Band Nanosecond Pulse Amplifier"

Moscow, Pribory i Tekhnika Eksperimenta, No 2, Mar/Apr 70, pp 129-131

Abstract: A wide-band nanosecond pulse amplifier is described with a gain of 40 DB, a frequency band of 10-120 MHz, nonuniformity of no more than 1.5 DB in frequency response, sensitivity of 0.5 mV, signal-to-noise ratio of 25, input impedance of 75 ohms, and output impedance of 50 ohms. The proposed amplifier may be used in time-interval selector circuits, time-amplitude converters, nuclear radiation detectors (where it is used as a preamplifier), time and amplitude devices, etc.

1/1

2/2 021 UNCLASSIFIED PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0112930

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EQUIL. WAS STUDIED IN THE SYSTEM 2,METHYLHEXANE (I),3,METHYLHEXANE (II) IN THE LIQ. AND VAPOR PHASES AT 20-170DEGREES BY USING ALCL SUB3 AS A CATALYST. FROM THE EQUIL. DATA DELTAETADEGREES SUB368 AND DELTASDEGREES SUB368 WERE MINUS 24 PLUS OR MINUS 50 CAL-MOLE AND MINUS 0.47 PLUS OR MINUS 0.1 EU. DIFFERENCE IN ENTROPY OF I AND II CALCD. FOR ONE STEREOISOMER OF II (L OR D) WAS MINUS 1.85 EU BASED ON EQUIL. DATA. FACILITY: BELORUSS. GOS. UNIV. IM. LENINA, MINSK, USSR.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--090CT70

TITLE--THERMODYNAMICS OF METHYLHEXANE ISOMERIZATION -U-

AUTHOR-(04)-RUGANOV, G.N., KOBU, G.YA., ANDREYEVSKIY, D.N., NIKULIN, K.V.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(1), 16-21

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMODYNAMICS, HEXANE, ALKYL RADICAL, ISOMERIZATION, PHASE EQUILIBRIUM, ENTROPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1966 STEP NO--UR/0204/70/010/001/0016/0021

CIRC ACCESSION NO--AP0112930

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125550

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF BZCH SUB2 BR (I) WITH MEONA IN MEOH AT 35DEGREES GAVE ONLY BZCH SUB2 OME (II) AND BZCH SUB2 OH (III) (CONSIDERED FORMED THROUGH THE INTERMEDIATE 1,METHOXY,1,PHENYLETHYLENE OXIDE, WHICH WAS NOT ISOLATED). AT 0-5DEGREES THIS REACTION GAVE THE ABOVE PRODUCTS AND ALSO 2 ISOMERS OF 1,BENZOYL,2,BROMOMETHYL,2,PHENYLETHYLENE OXIDE (IV). THE REACTION OF I WITH KF IN REFLUXING MEOH GAVE II, III, BZCH SUB2 F, AND 2 ISOMERS OF IV. THE REACTIONS OF C SUB6 F SUB5 COCH SUB2 BR (V) WITH MEONA IN MEOH GAVE COMPLEX MIXTS. CONTG. IN SOME CASES C SUB6 F SUB5 H, 1,BROMOMETHYL,1,2,BIS(PENTAFLUOROPHENYL)ETHYLENE OXIDE (VI), AND 1,BROMOMETHYL,1,PENTAFLUOROPHENYL2,(P,METHOXYTETRAFLUOROBENZOYL)ETHYLENE OXIDE. THE REACTION OF V WITH KF-MEOH GAVE ALSO VI, C SUB6 F SUB5 H, AND TRANS,1,2,3,TRIS(PENTAFLUOROPHENYL) CYCLOPROPANE (VII). HEATING VII WITH HI-ACOH ISOMERIZED IT TO 2,5,BIS(PENTAFLUOROPHENYL),3,PENTAFLUOROBENZOYLMETHYLFURAN. THE MECHANISMS OF THE ABOVE REACTIONS ARE DISCUSSED. FACILITY: NOVOSIBIRSK. INST. ORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--REACTION OF OMEGA BROMOACETOPHENONE AND OMEGA BROMOPENTAFLUOROACETOPHENONE WITH SOME NUCLEOPHILIC REAGENTS -U-

AUTHOR-(05)-ANDREYEVSKAYA, O.I., BARKHASH, V.A., KOROBEYNICHEVA, I.K., KRIVOUSOVA, YE.D., SOKOLENKO, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 711-17

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BROMINATED ORGANIC COMPOUND, ACETOPHENONE, FLUORINATED ORGANIC COMPOUND, ORGANIC OXIDE, CHEMICAL REACTION MECHANISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1961 STEP NO--UR/0366/70/006/004/0711/0717

CIRC ACCESSION NO--AP0125550

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135111

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ET SUB3 SI)SUB2 HG REACTED EXOTERMICALLY WITH S WITHOUT A SOLVENT TO YIELD 94PERCENT ET SUB3 SISHGSIET SUB3, UNDISTILLABLE GREENISH LIQ., WHICH IN UV LIGHT DECOMPD. TO 100PERCENT HG AND (ET SUB3 SI)SUB2 S, B SUB7 125-7DEGREES. REACTION WITH HBR AT ROOM TEMP. RAPIDLY GAVE HG, ET SUB3 SIBR, AND ET SUB3 SISH. SIMILARLY, S AND (ET SUB3 GE)SUB2 HG GAVE AFTER 0.5 HR AT 5DEGREES HG AND (ET SUB3 GE)SUB2 S, AS EVIDENTLY THE EXPECTED INTERMEDIATE ET SUB3 GESHGGEET SUB3 IS VERY UNSTABLE. ONLY 1 EQUIV. S REACTED DESPITE ANY EXCESS PRESENT. FACILITY: LAB. STABIL. POLIM., GORKI, USSR.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--REACTION OF SULFUR WITH BIS TRIETHYLSILYL AND BIS TRIETHYLGERMYL MERCURY -U-

AUTHOR-(04)-GALDYSHEV, YE.N., ANDREYEVICHEV, V.S., VYAZANKIN, N.S., RAZUVAYEV, G.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 4(4), 939

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SULFUR, ORGANOSILICON COMPOUND, ORGANOGERMANIUM COMPOUND, ORGANOMERCURY COMPOUND, EXOTHERMIC REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1440 STEP NO--UR/0079/70/040/004/0939/0939

CIRC ACCESSION NO--AP0135111

UNCLASSIFIED

USSR

ANDREYEVA-GALANINA, T., et al., Meditsinskaya Gazeta, 10 Mar 70, p 3

second have the same effect as steady noise, the intervals should be filled with sounds of a different quality and pitch, but the same intensity. Irregularly occurring noises should be preceded by light signals to diminish the startling reaction. Individuals with central nervous system disorders, abnormal blood pressure, or cardiac stenosis must not be employed on jobs done in noisy surroundings. All persons working in such places must be given periodic medical examinations. The Elbrus Sanatorium in Nal'chik has opened a special department for patients suffereing from noise sickness. Numerous commissions have been established to plan and enforce the implementation of comprehensive measures to reduce the level of noise.

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ANDREVEVA-GALANINA, T., and SUVOROV, G.

"Noise Sickness"

Meditsinskaya Gazeta, 10 Mar 70, p 3

Abstract: Noise is detrimental to human health and must therefore be combatted. Noise not only disrupts mental work, but also lowers the efficiency of manual work, induces rapid fatigue, impairs the function of various internal organs, and causes neuroses. While the functional state of the ear changes very slowly, the central nervous system is most susceptible to this harmful stimulus. No organic lesions develop, but its functional state is impaired. Most reflexes are exaggerated, there is general irritability, insomnia, hyper- or hypotension, acute or dull pain in the heart, and gastrointestinal disorders, indicating involvement of the autonomic nervous system and the diencephalon. The electroencephalogram shows typica; changes, and there is a fine tremor of the hands. These are the main signs of noise sickness, which depend not only on the individual, but also on the quality, pitch, intensity and duration of the noise. The simplest therapeutic and preventive measure is to rotate workers between jobs done in noisy surroundings and jobs done in quiet places. Since noise pulses occurring with a frequency greater than 30 per 1/2

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drop in the functional activity of the regions of the central nervous system studied. Further research on the metabolic processes in the brain and the functioning of the entire brain would be desirable as a means of developing appropriate preventive measures and treatment.

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USSR UDC 612.81-06:612.014.45

ANDREYEVA-GALINA, Ye. Ts., ALEKSEYEV, S. V., KADYSKIN, A. V., and VORONTSOV, V. M., Sanitary Hygiene Medical Institute, Leningrad

"Electrophysiological and Biochemical Investigations of the Brain during the Experimental Action of Various Noise Parameters"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, Jul 70, pp 39-42

Abstract: The biological reactions to noise of various structures of the cortex (auditory, visual, and sensorimotor region) and subcortical structures of the cerebrum (specific and nonspecific nuclei of the thalamus, the reticular formation of the mesencephalon, and the pons varolii) were studied in 20 rabbits by means of chronically implanted intracerebral electrodes in the indicated brain structures. The animals were subjected to a constant noise in a special chamber. Tissue respiration of the cerebrum under the influence of noise was investigated. It was found that the oxygen requirement of the cerebral structures depends directly on the duration of the noise; the earliest shifts are observed in the auditory region. The disturbances in tissue respiration can be grouped into two subsequent phases: an activation phase, in which the intensity of tissue respiration is enhanced; and a depressive phase in which the oxygen requirement decreases sharply, indicating a

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complained of fatigue, headaches, poor sleep habits, and general debility. However, there are no grounds to relate these complaints solely to the subsonic frequency range. The most general physiological effects observed upon exposure of the human organism to subsonics are shifts in respiratory and cardiac rhythms, disturbances of the functioning of the central nervous system, etc.

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USSR UDC 613.644+612.014.45

ANDREYEVA-GALANINA, Ye. Ts., MALYSHEV, E. N., PRONIN, A. P., and SKORODUMOV, G. Ye., Leningrad Sanitary-Hygiene Medical Institute and Leningrad Institute of Railroad Transport Engineers"

"The Effect of Subsonics on the Human Organism"

Moscow, Gigiyena i Sanitariya, No 11, 1970, pp 65-69

Abstract: The noise spectrum was recorded for the simultaneous operation of VP-20V, I-18, and V 10/8 compressors, measured at the work area of one of the Oktyabrskaya Railway compressor stations, for the frequency range 6.3-3,200 Hz. The overall sound pressure measured by the Leningrad Institute's new meter at the work area of the shift foreman was 113 db, but the value measured by the standard III-63 noise meter was only 98 db. The maximum peak to the left of 50 Hz (12.5 Hz) was 111 db, and that to the right of 50 Hz was 96 db (125 Hz). Thus, the greatest sound pressure levels correspond to a frequency of 12.5 Hz. Analysis of the spectrum showed that the principal sources of compressor noise in the subsonic range were the stage I and II compressors (peaks at frequencies of 8, 12.5 and 25, and in the audible frequencies -- harmonics of the fundamental frequencies of 50 and 125 Hz). Compressor station workers questioned

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"Use of Experimental Models in Studying the Effect of Noise on the Organism"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, Jul 70, pp 4-8

Abstract: The reliability of biological models in studying the effect of noise on hearing sensitivity and on various human organs, including the heart and blood vessel systems, is discussed. It is noted that heart activity, blood circulation, electrocardiograms, and the bioelectrical reactions of the brain and central nerve system are different in man and in animals and also vary considerably among different animal species. The noise stimulus is a specific stimulus affecting the hearing organ as well as the cerebrum to varying degrees; related studies must be made under well-controlled conditions, since noise effects on the body also depend on such parameters as pitch and intensity. When man is used as the test object in a noise-control chamber similar to that used in animal experiments, the observations made often differ from those made in an industrial environment. It is therefore important that tests on humans be made in the actual environment.

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USSR

ANDREYEVA-GALANINA, Ye. Ts., DOLGOVA, M. A., and YAKUBOVICH, T. G., Leningrad Sanitary-Hygiene Medical Institute

"The Effect of General Vertical Vibration on the Liver Vascular Bed"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 12, 1971, pp 22-25

Abstract: The effect of vertical vibration of rabbits on the vascular bed of the liver was studied. Three rabbits were subjected to vibration of 50 Hz with an mm amplitude of 1.3 mm for 120 days, four rabbits, for 40 days, and four rabbits served as controls. Histological studies showed that the total area of the liver blood vessels and capillaries increased by 26% and 58% after 40 and 120 days of vibration, respectively. Arterioles were affected more profoundly than capillaries in this respect in both cases. Their area increased by 34 and 70% after 40 and 120 days of vibration, respectively. Number of capillaries and arterioles also increased. Interlobular veins, main veins, and capillaries were dilated and distended with blood, and the presence of perivascular infiltrations and hemorrhages was detected in all experimental animals.

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